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Josephson Effect in Trapped Spin-orbit Coupled Bose-Einstein Condensation WAI HO TANG, The Univ of Hong Kong — Spin-orbit coupling (SOC) has given rise to many novel states of matter including topological insulators and superconductors. Recent experimental realization of SOC in neutral cold atom systems have opened a new avenue to study its effects in Bose-Einstein condensate. In this study, we discuss the Josephson-like mode in the spin-orbit coupled condensate, and study its decoherence due to thermal effect. We discuss experimental implications of our results.

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